

# PATENT COOPERATION TREATY

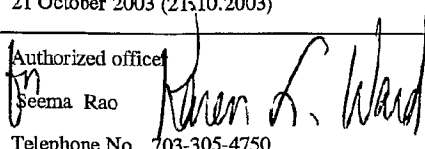
## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 10 NOV 2003

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Applicant's or agent's file reference  1988.006PC06	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No.  PCT/US01/43113	International filing date ( <i>day/month/year</i> )  16 November 2001 (16.11.2001)	Priority date ( <i>day/month/year</i> )  17 November 2000 (17.11.2000)
International Patent Classification (IPC) or national classification and IPC  IPC(7): H04J 3/02, 3/14, 3/24; H04Q 11/04 and US Cl.: 370/229, 230, 244, 352, 359, 395.1, 395.7, 395.71, 395.72, 398, 412, 413, 414, 419		
Applicant  FOUNDRY NETWORKS, INC.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>   </u> sheets.</p> <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input checked="" type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</li> <li>IV <input checked="" type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>		
Date of submission of the demand  14 June 2002 (14.06.2002)	Date of completion of this report  21 October 2003 (21.10.2003)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer  Seema Rao Telephone No. 703-305-4750	

Form PCT/IPEA/409 (cover sheet)(July 1998)

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US01/43113

## I. Basis of the report

1. With regard to the **elements** of the international application:\*

- ☒ the international application as originally filed.
- ☒ the description:  
pages 1-86 as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.
- ☒ the claims:  
pages 87-114, as originally filed  
pages NONE, as amended (together with any statement) under Article 19  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.
- ☒ the drawings:  
pages 1-50, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.
- ☐ the sequence listing part of the description:  
pages NONE, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/fig NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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## III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The question whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been and will not be examined in respect of:

☐ the entire international application,

☒ claims Nos. 12-137

because:

☐ the said international application, or the said claim Nos. \_\_\_\_\_ relate to the following subject matter which does not require international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_ are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 12-137

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

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**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☒ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention is accordance with Rules 13.1, 13.2 and 13.3 is

- ☒ complied with.
- ☒ not complied with for the following reasons:

Please See Continuation Sheet

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.
- ☒ the parts relating to claims Nos. 1-11

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/US01/43113**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims 1-11	YES
	Claims NONE	NO
Inventive Step (IS)	Claims 4-7	YES
	Claims 1-3 and 8-11	NO
Industrial Applicability (IA)	Claims 1-11	YES
	Claims NONE	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 1-3 and 8-11 lack an inventive step under PCT Article 33(3) as being obvious over Manning et al. Manning et al. disclose nearly all the subject matter now claimed. Note col. 1 lines 54-63 which recite the switch fabric controller for reducing the problems associated with increasing the availability and reliability of the switch fabric of digital switching including the step of mapping the input ports to the output ports of the switch fabric clearly anticipate the digital switch including the switching fabric and blades, i.e. ports, coupling the switching fabric as in claims 1 and 11. Fig. 1 which shows the I/O modules receiving information, whereby each I/O module providing this information to the inputs of the switch fabric including the switch control module receiving control information from the various I/O modules to assist with carrying out the switching scheme clearly anticipate outputting in-band control information to the switching fabric as in claims 1 and 11. Further, col. 3 line 45 to col. 4 line 22 which recite the cell flow processor interconnecting the switch control module using serial data signals clearly anticipate the serial pipes, i.e. serial links, wherein the port outputs serial data streams to the switching fabric as in claims 1 and 10-11 and the packet processor as in claims 8 and 9. Col. 8 lines 21-39 which recite the port mapping memory includes the foreground port mapping data for the foreground switch fabric, such as an nxn cross-point switch fabric clearly anticipate the switching fabric includes cross-points as in claims 1 and 3. Col. 5 lines 9-20 which recite the data signals provided from the various modules are provided as communication cells having a header portion and a data portion wherein these communication cells are provided in ATM format, or the like clearly anticipate the cells having a size no greater than 160 bytes and a payload of data no greater than 148 bytes as in claim 7. Manning et al. did not recite the term blades and serial pipes as in claims 1 and 11; however, applicant explains in the specification pages 1 and 2 that blades are merely circuit cards, including ports interconnected by switch fabric and serial pipes are merely serial links. It would have been obvious to substitute the terms blades and serial pipes for circuit cards or ports interconnected by switch fabric and serial links, respectively, because applicant recites in the specification that they are equivalent.

----- NEW CITATIONS -----  
NONE

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
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## Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

### **IV. 3. This Authority considers that the requirement of unity of invention is accordance with Rules 13.1, 13.2 and 13.3 is not complied with for the following reasons:**

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 1-11, drawn to switching control including serial-parallel or parallel-serial conversion for input or output.

Group II, claim(s) 12-60, drawn to switching control including time and space switches.

Group III, claim(s) 61-74, drawn to techniques for communication using message having an address header.

Group IV, claim(s) 75-94, drawn to pathfinding or routing using a queuing arrangement.

Group V, claim(s) 95-108, drawn to pathfinding using queuing including contention resolution.

Group VI, claim(s) 109-125, drawn to combining or distributing information via time channels including synchronizing.

Group VII, claim(s) 126-135, drawn to switching control including a bus switch.

The inventions listed as Groups I-VII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Group I is drawn to switching control including serial-parallel or parallel-serial conversion for input or output, while Group II is drawn to switching control including time and space switches, Group III is drawn to techniques for communication using message having an address header, Group IV is drawn to pathfinding or routing using a queuing arrangement, Group V is drawn to pathfinding using queuing including contention resolution, Group VI is drawn to combining or distributing information via time channels including synchronizing, and Group VII is drawn to switching control including a bus switch.